Arthropoda Selecta 18(1–2): 35–46

The spider genus *Trachelas* L. Koch, 1872 in Crimea and Caucasus with the description of *Paratrachelas* gen.n. (Aranei: Corinnidae)

Пауки рода *Trachelas* L. Koch, 1872 Крыма и Кавказа с описанием *Paratrachelas* gen.n. (Aranei: Corinnidae)

Mykola M. Kovblyuk, Anton A. Nadolny
Н.М. Ковблюк, А.А. Надольный

Zoology Department, National Taurida V.I. Vernadsky University, Yaltinskaya street 4, Simferopol 95007 Ukraine. E-mail: kovblyuk@mail.ru

Кафедра зоологии Таврического национального университета им. В.И.Вернадского, ул. Ялтинская 4, Симферополь 95007 Украина.

KEY WORDS: spiders, *Trachelas, Paratrachelas* gen.n., redescriptions, new distribution records, phenology, Crimea, Abkhazia, Ingushetia.

КЛЮЧЕВЫЕ СЛОВА: пауки, *Trachelas, Paratrachelas* gen.n., переописания, новые находки, фенология, Крым, Абхазия, Ингушетия.

ABSTRACT. The Corinnidae genus *Paratrachelas* gen.n. is described with *P. maculatus* Thorell, 1875 comb.n. (ex *Trachelas* L. Koch, 1872) as its type species and with an additional species *P. acuminus* (Zhu et An, 1988) comb.n. (ex *Trachelas*) from China and Korea. The type species of *Trachelas* (*T. minor* O. Pickard-Cambridge, 1872) is re-described. *T. minor* is recorded for the first time from Crimea and Ukraine, and for Ingushetia (Russia) and Abkhazia. Diagnostic drawings, distribution, spatial distribution and phenology are provided for both *Trachelas minor* and *Paratrachelas maculatus*.

РЕЗЮМЕ. В семействе Corinnidae описан новый род *Paratrachelas* gen.n. с типовым видом *P. maculatus* Thorell, 1875 comb.n. ex *Trachelas* L. Koch, 1872. В состав рода входит также *P. acuminus* (Zhu et An, 1988) comb.n. ex *Trachelas* из Китая и Кореи. Переописан типовой вид рода *Trachelas* — *T. minor* O. Pickard-Cambridge, 1872. *T. minor* впервые зарегистрирован в Крыму (соответственно и на Украине), а также в Ингушетии (Россия) и Абхазии. Для обоих видов (*T. minor* и *P. maculatus*) приведены переописания, диагностические рисунки, географическое распространение, биотопическая приуроченность в Крыму и фенология.

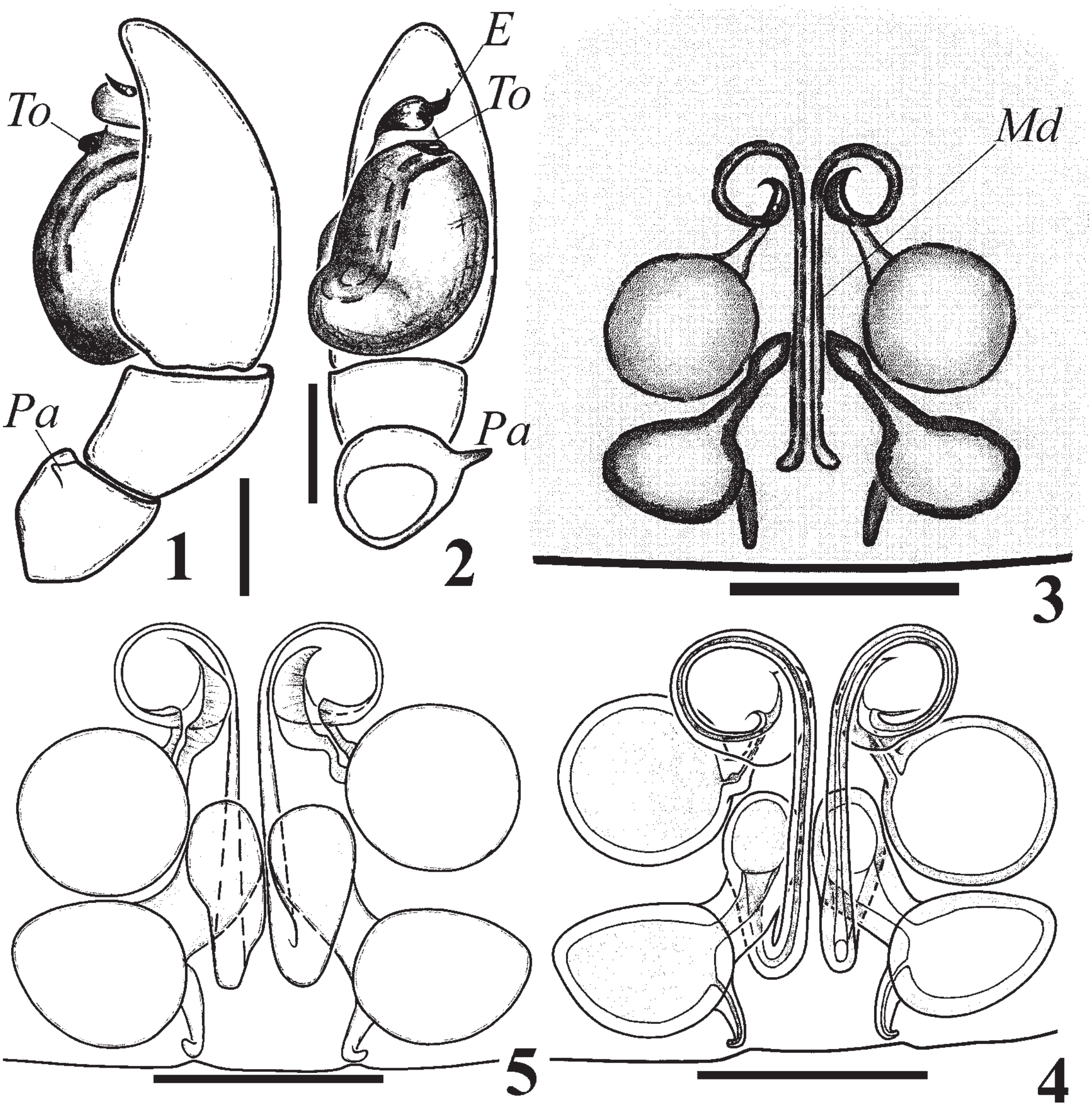
Introduction

Trachelinae genera of Corinnidae in the Old World may be easily recognized by the total absence of leg spines (in both sexes) and the presence, at least in males, of a ventral series of small blunt cusps on the last three segments of the anterior legs (tibiae, metatarsi, and tarsi of legs I and II) [Platnick & Shadab, 1974a; Platnick & Ewing, 1995] (Figs 68–70, 72–73). However these cusps are absent in the type species of *Trachelas* L. Koch, 1872 — *T. minor* O. Pickard-Cambridge, 1872 (Figs 29–36).

The genus *Trachelas* currently contains 88 described species [Platnick, 2009] from North and South America, Africa, Europe and Asia. The genus has been well revised in North and Central America only [Platnick & Shadab, 1974a, b]. Spiders of the genus *Trachelas* have a «bright red carapace which contrasts strikingly with a pale white abdomen», but «considerable diversity in the genitalia, the shape of endites, the cheliceral dentition, and the distribution of trichobothria» [Platnick & Shadab, 1974a: 3]. In the revision of the North and South American *Trachelas* species, two genera were resurrected: *Trachelopachys* Simon, 1897, and *Meriola* Banks, 1895 [Platnick & Ewing, 1995]. But in the Old World, *Trachelas* is unrevised.

In the Palaearctic 16 species are known: 9 species were described from Europe and the Canary and Azores islands, 1 from North Africa, and 6 from Asia [Platnick, 2009]. Only 5 of the 9 species known from Europe, Canary and Azores were well described and illustrated: *T. canariensis* Wunderlich, 1987; *T. maculatus* Thorell, 1875; *T. macrochelis* Wunderlich, 1992; *T. rayi* Simon, 1878; *T. uniaculeatus* Schmidt, 1956 [Mikhailov, 1987; Wunderlich, 1987, 1992]. The other four European species are poorly known (*T. minor*, *T. praestans* (O. Pickard-Cambridge, 1911), *T. purus* Kritscher, 1969, *T. validus* Simon, 1884).

Two *Trachelas* species were found in Crimea: the type species of the genus, *T. minor*, and a species with the type locality on the Peninsula, *T. maculatus* Thorell, 1875. The goal of this paper is to re-describe and illustrate these species and to describe the new genus with the type *T. maculatus*.



Figs 1–5. Copulatory organs of *Trachelas minor*: 1 — male palp, retrolateral view; 2 — male palp, ventral view; 3 — epigyne, ventral view; 4 — epigyne, ventral view (after maceration); 5 — epigyne, dorsal view (after maceration).

Рис. 1–5. Копулятивные органы *Trachelas minor*: 1 — пальпа самца, ретролатерально; 2 — пальпа самца, вентрально; 3 — эпигина, вентрально; 4 — эпигина, вентрально (после мацерации); 5 — эпигина, дорсально (после мацерации).

Material and Methods

Specimens for this study were recently collected in Crimea and Abkhazia by the first author, and other collectors mentioned in the text, mostly by pitfall traps. All specimens were returned to, or deposited in, the following collections: CP — personal collection of A.V. Ponomarev, Rostov-on-Don, Russia; EMZ — personal collection of E.M. Zhukovets, Minsk, Belarus; TNU — Zoology Department of V.I. Vernadsky Taurida National University, Simferopol, Ukraine, M.M. Kovblyuk; ZMMU — Zoological Museum of the Moscow State University, Moscow, Russia, K.G. Mikhailov.

The following abbreviations are used in the text: a — apical; AM, AL, PM, PL — anterior median, anterior lateral, posterior median and posterior lateral eyes; p — prolateral; RTA — retrolateral tibial apophysis of male palp; v — ventral. The following abbreviations have been used for morphological terms: *Ap* — anterior pocket of epigyne; *C* — conductor; *Cu* — cusp; *E* — embolus; *Md* — median ducts of epigyne; *Pa* — patellar apophysis; *Pb* — preening brush on distal end of metatarsus; *Pc* — preening comb on distal end of metatarsus; *RTA* — retrolateral tibial apophysis; *To* — tegular outgrowth; *Tu* — tuft on distal end of tarsus. Coloration was described from specimens preserved in 75% ethanol/water solution with added glycerin (9:1 by volume). Legs and palpal segments were measured after separation from the cephalothorax. All measurements are in mm. All scale bars equal 0.1 mm.

Taxonomic survey

Trachelas L. Koch, in O. Pickard-Cambridge, 1872

Type species: *T. minor* O. Pickard-Cambridge, 1872

Trachelas minor O. Pickard-Cambridge, 1872
Figs 1–36.

T. m. O. Pickard-Cambridge, 1872: 256, pl. 16, f. 41 (♂♀).
T. m.: Simon, 1878: 283–284 (♂♀).
T. m.: Simon, 1897: 179, 184, f. 178 (♂).
T. m.: Simon, 1932: 957–958, 977, f. 1498–1499 (♂♀).

MATERIAL. UKRAINE, CRIMEA. Saky Distr.: 1 ♂, 2 ♀♀ (TNU–1679/18; 1682/17; 1683/11), env. Pribrezhnaya railway station, 19.05.–19.07.2000; Simferopol Distr.: 3 ♂♂, 5 ♀♀ (TNU–1830/9; 1832/13; 1835/17; 1836/32), env. Skvortsovo Vil., 27.02.–1.06.2002. ABKHAZIA: 1 ♀ (TNU–2636/1), N 43°9’43”, E 40°25’7”, env. Pitsunda, mouth of Ryapsh river, Myusser Distr. of Pitsundo-Myussersky Reserve, kolhida wood, 1–7.07.2008. RUSSIA, INGUSHETIA: 1 ♀ (CP: 46.10.1/1), Megas, sweeping, 26.08.2004, T.V. Khanov.

DIAGNOSIS. *T. minor* is most similar to *T. canariensis* Wunderlich, 1987, from the Canary Islands [Wunderlich, 1987: 238, f. 636–639], but differs in having a much shorter embolus (in *T. canariensis* the embolus reaches the distal end of cymbium) and by different proportions of the epigynal ducts.

DESCRIPTION. Measurements (♂ / ♀; n = 1 / 1): total length 1.9 / 2.4; carapace 0.9 / 1.0 long, 0.8 / 0.8 wide. Eye diameters and interdistances: AM 0.07 / 0.07, AL 0.08 / 0.08, PM 0.07 / 0.08, PL 0.07 / 0.07, AM–AM 0.04 / 0.04, AM–AL 0.01 / 0.01, PM–PM 0.06 / 0.05, PM–PL 0.04 / 0.04, AM–PM 0.02 / 0.01, AL–PL 0.04 / 0.04. Distances between anterior eyes and clypeal margin: AM–clypeus 0.06 / 0.07, AL–clypeus 0.05 / 0.06. Length of leg segments (male / female):

	femur	patella	tibia	metatarsus	tarsus	Total length
I	0.6/0.6	0.3/0.3	0.5/0.5	0.4/0.4	0.3/0.3	2.1/2.1
II	0.5/0.6	0.3/0.3	0.4/0.4	0.4/0.4	0.3/0.3	1.9/2.0
III	0.4/0.4	0.2/0.2	0.3/0.3	0.4/0.4	0.2/0.2	1.5/1.5
IV	0.6/0.7	0.2/0.3	0.5/0.5	0.5/0.6	0.3/0.3	2.1/2.4

Length of palpal segments (male / female): femur 0.2 / 0.3, patella 0.1 / 0.2, tibia 0.1 / 0.2, cymbium / tarsus 0.3 / 0.3. Legs spines and cusps absent (Figs 29–36). All legs with claw tufts; metatarsi III–IV with distal preening combs (Figs 29–36).

Cheliceral teeth (anterior + posterior): 3 / 3 +2 / 2, length of basal cheliceral segment (paturon) 0.35 / 0.35. Length of basal segments of spinnerets: anterior 0.08 / 0.10, median 0.07 / 0.08, posterior 0.08 / 0.10.

Carapace and sternum brown with vermiculation. Abdomen light gray. Legs and palps light brown. Habitus: male — Figs 6–12; female — Figs 17–21.

Male palp: Figs 1–2, 13–16. Female epigyne: Figs 3–5, 22–23. Tibia of male palp without retrolateral tibial apophysis, patella with retrolateral tooth-like apophysis. Embolus coiled. Conductor poorly developed. Tegulum with dorso-apical outgrowth near base of embolus. Epigyne without anterior epigynal margin, without lateral pockets. Copulatory openings anterior of spermathecae.

VARIATION. Male total lengths (n = 2) 1.9; carapace (n=4) length 0.9; width — 0.8 to 0.9. Female total length (n = 5) 2.4 to 2.8; carapace length (n=6) 0.9 to 1.0; width 0.8 to 0.9. Female from Ingushetia larger than females from Crimea: total length 3.1; carapace 1.1 length, 1.0 width.

NOTE. Type locality — Syria [Simon, 1878].

DISTRIBUTION. West Africa and the Ancient Mediterranean region — from Spain to Uzbekistan: Sierra-Leone, Liberia, Algeria, Spain, France, Italy, Greece, Syria, Krasnodar Area of Russia, Azerbaijan, Turkmenistan, Uzbekistan [Simon, 1878, 1932; Mikhailov, Seyfulina, 2003]; Crimea (Ukraine), Abkhazia and Ingushetia (Russia).

COMMENTS. *T. minor* is a species newly recorded in Crimea (Ukraine), Ingushetia (Russia) and Abkhazia.

HABITATS. In Crimea — meadows near water in the plains region. Our data about habitats correspond well to those of E. Simon [Simon, 1878].

PHENOLOGY. ♂♂ — II–V; ♀♀ — II–VII and VIII (in Ingushetia).

Paratrachelas **gen.n.**

Type species: *Trachelas maculatus* Thorell, 1875.

COMPOSITION. *P. maculatus* (Thorell, 1875) comb.n. and *P. acuminus* (Zhu et An, 1988) comb.n. — both ex *Trachelas*.

ETYMOLOGY. The generic name refers to Para- (lat. sub-equal, accompanying, nearest) and the related genus *Trachelas*.

DIAGNOSIS. From *T. minor*, the type species of *Trachelas,* members of this genus are distinguished by 1) lack of apophysis on the male palpal patella, 2) presence of RTA, 3) presence of anterior pocket of epigyne in front of anterior pair of receptacles, and 4) absence of median ducts of epigyne. Some of these differences (3 and 4) were mentioned by K.G. Mikhailov [1987] for species of the *maculatus* group, but we suggest these differences are of the generic level, not of the species group. Presence and/or absence of the tibial and/or patellar apophyses are very important generic characters. Presence of anterior pocket of epigyne is an apparently synapomorphic character that supports the monophyly of the genus.

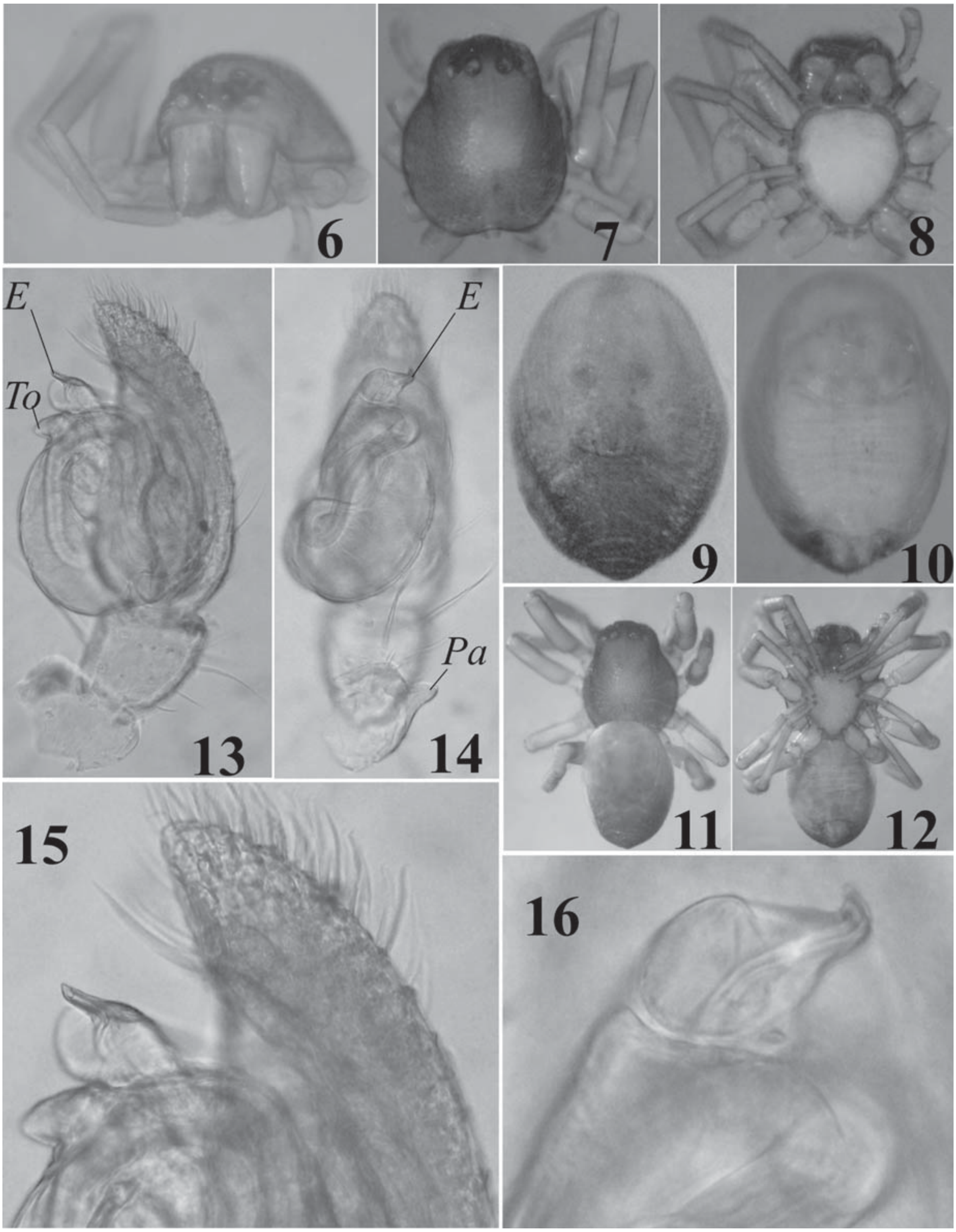
Paratrachelas gen.n. similar to some species of Neotropical genus *Meriola* Banks, 1895, in having an RTA, no apophysis on patella, and having anterior pocket of epigyne, for example *M. californica* (Banks, 1904); *M. foraminosa* (Keyserling, 1891); *M. manuel* Platnick & Ewing, 1995; *M. mauryi* Platnick & Ewing, 1995; *M. penai* Platnick & Ewing, 1995; *M. rahue* Platnick & Ewing, 1995; *M. tablas* Platnick & Ewing, 1995 [Platnick & Shadab, 1974b; Platnick & Ewing, 1995]. But the anterior epigynal pocket is absent in the type species of *Meriola* — *M. decepta* Banks, 1895 [Platnick & Shadab, 1974b: 105–106]. *Meriola* species have elongated and sharply tipped ventral leg cusps [Platnick & Ewing, 1995], unlike in *Trachelas* and *Paratrachelas*. In addition, some *Meriola* species have normal leg spines [Platnick & Ewing, 1995]. *Meriola* has a Neotropical range [Platnick & Ewing, 1995; Platnick, 2009] and it is not found in Europe.

Main differences among genera *Trachelas, Meriola* and *Paratrachelas* gen.n., based on their type species, are given in Table 1.

DISTRIBUTION. This genus is Palaearctic and known from Hungary, Bulgaria, Ukraine (Crimea), China (Shanxi) and Korea.

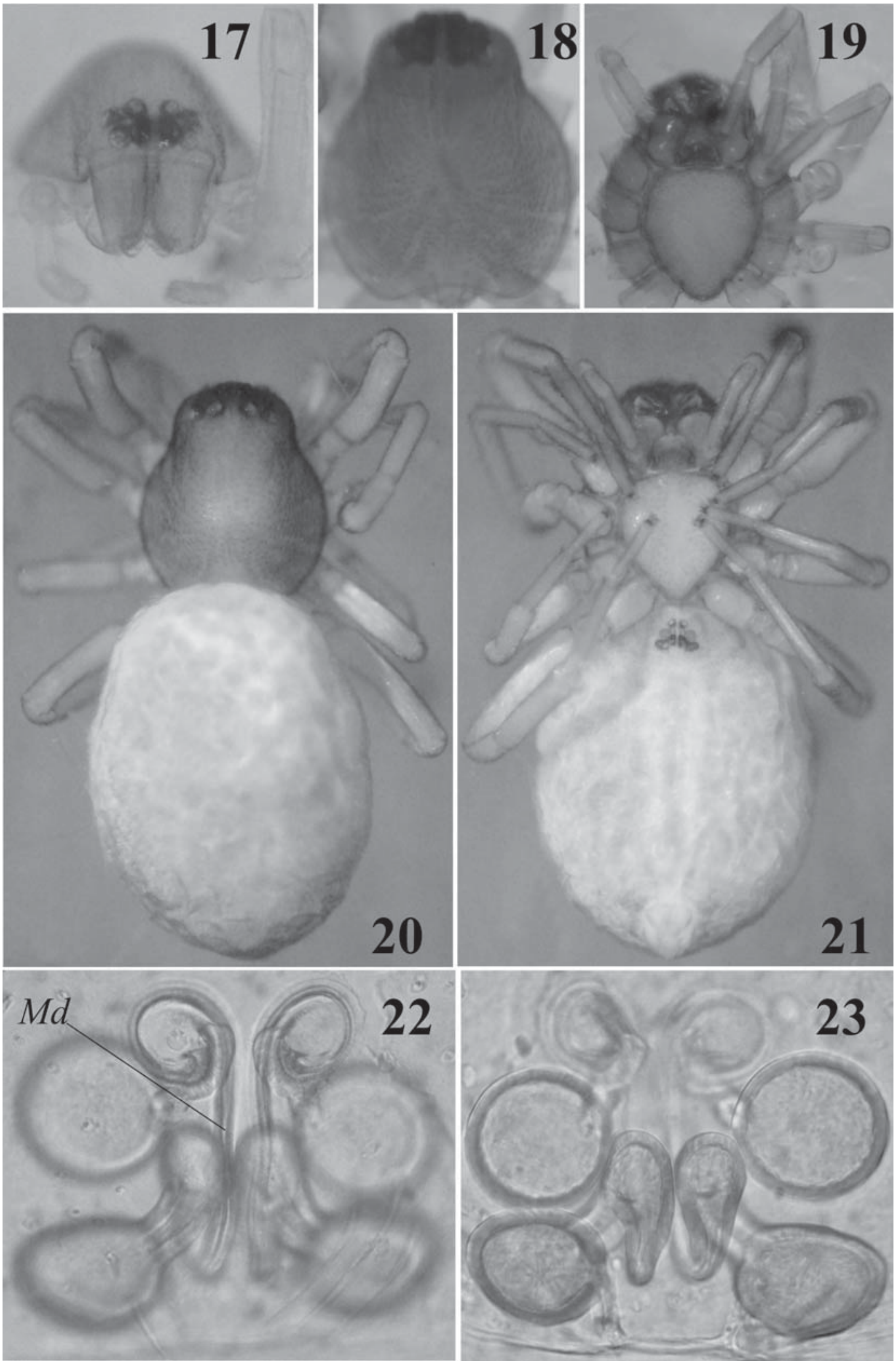
Paratrachelas maculatus (Thorell, 1875) **comb.n.**
Figs 37–81.

Trachelas m. Thorell, 1875a: 77 (♂).
Trachelas m. Thorell, 1875b: 87 (♂).



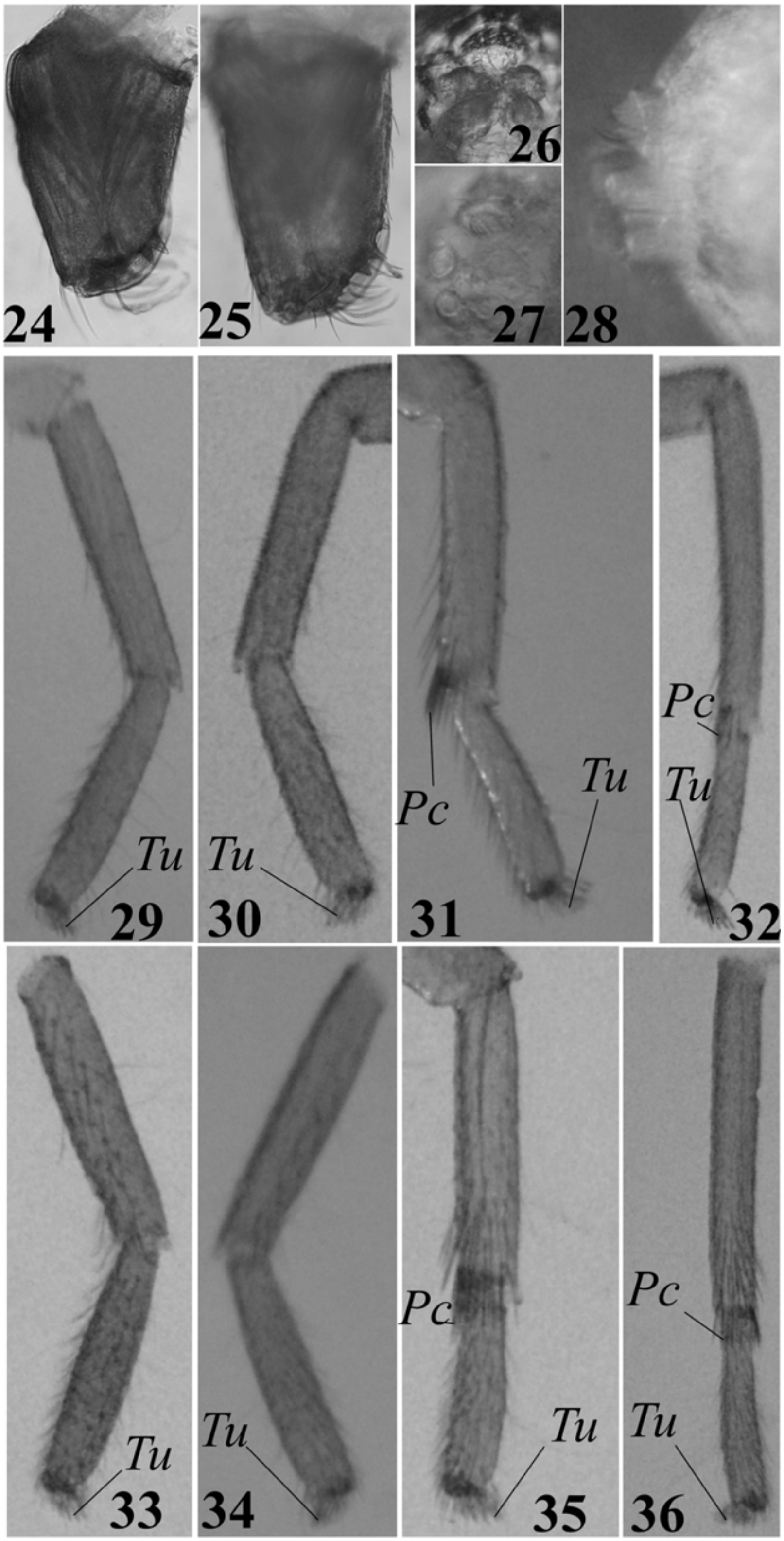
Figs 6–16. Male of *Trachelas minor*: 6 — cephalothorax, frontal view; 7 — carapace; 8 — sternum; 9 — abdomen, dorsal view; 10 — abdomen, ventral view; 11 — general appearance, dorsal view; 12 — general appearance, ventral view; 13 — palp, retrolateral view (after maceration); 14 — palp, ventral view (after maceration); 15 — apical part of palp, retrolateral view (after maceration); 16 — apical part of bulbus, ventral view (after maceration).

Рис. 6–16. Самец *Trachelas minor*: 6 — головогрудь, спереди; 7 — карапакс; 8 — стернум; 9 — брюшко, дорсально; 10 — брюшко, вентрально; 11 — габитус, дорсально; 12 — габитус, вентрально; 13 — пальпа, ретролатерально (после мацерации); 14 — пальпа, вентрально (после мацерации); 15 — верхняя часть пальпы, ретролатерально (после мацерации); 16 — верхняя часть бульбуса, вентрально (после мацерации).



Figs 17–23. Female of *Trachelas minor*: 17 — cephalothorax, frontal view; 18 — carapace; 19 — sternum; 20 — general appearance, dorsal view; 21 — general appearance, ventral view; 22 — epigyne, ventral view (after maceration); 23 — epigyne, dorsal view (after maceration).

Рис. 17–23. Самка *Trachelas minor*: 17 — головогрудь, спереди; 18 — карапакс; 19 — стернум; 20 — габитус, дорсально; 21 — габитус, вентрально; 22 — эпигина, вентрально (после мацерации); 23 — эпигина, дорсально (после мацерации).

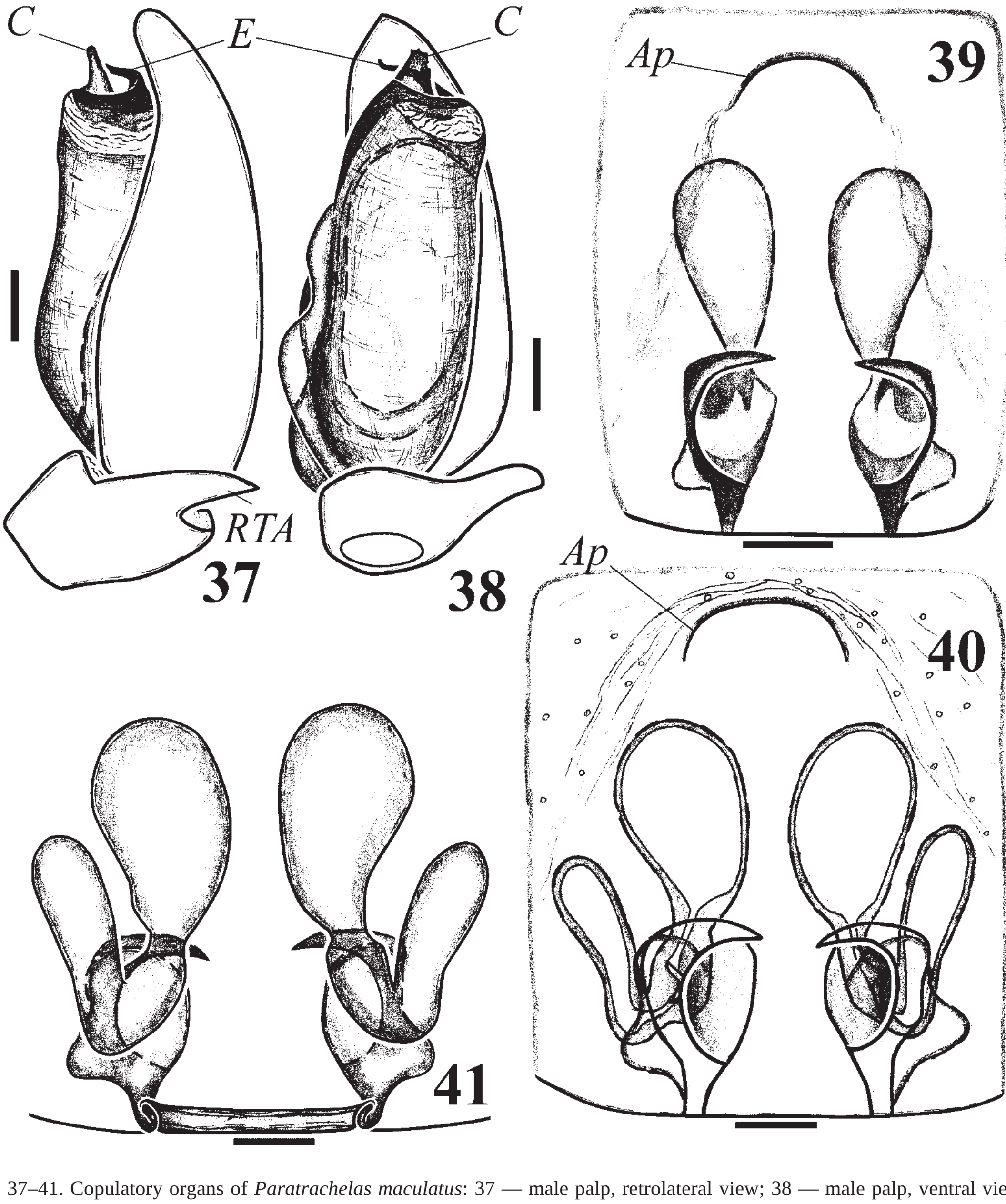


Figs 24–36. *Trachelas minor*: 24 — female chelicerae, ventral view; 25 — male chelicerae, dorsal view; 26 — male spinnerets, dorso-caudal view; 27 — female spinnerets, dorso-caudal view; 28 — female spinnerets, lateral view; 29–32 — male legs (tarsus–metatarsus) I–IV, prolateral view; 33–36 — female legs (tarsus–metatarsus) I–IV, prolateral view.

Рис. 24–36. *Trachelas minor*: 24 — хелицера самки, вентрально; 25 — хелицера самца, дорсально; 26 — паутинные бородавки самца, сверху–сзади; 27 — паутинные бородавки самки, сверху–сзади; 28 — паутинные бородавки самки, сбоку; 29–32 — лапка–предлапка ног I–IV самца, пролатерально; 33–36 — лапка–предлапка ног I–IV самки, пролатерально.

Table 1. Differences among genera *Trachelas, Meriola* and *Paratrachelas* gen.n., based on their type species.
Таблица 1. Отличия между родами *Trachelas, Meriola* и *Paratrachelas* gen.n., основанные на их типовых видах.

	Trachelas	***Meriola***	***Paratrachelas* gen.n.**
Type species	*T. minor*	*M. decepta*	*P. maculatus*
Cusps on male legs I–II tarsus–metatarsus–tibia	absent	present (elongated and sharply tipped)	present (short and blunt)
Normal leg spines	absent	absent in type species (present in some others)	absent
Patellar apophysis	present	absent	absent
RTA	absent	present	present
Anterior pocket of epigyne	absent	absent	present
Median ducts of epigyne	present	absent	absent
Generic range	Holarctic	Neotropic	Palaearctic



Figs 37–41. Copulatory organs of *Paratrachelas maculatus*: 37 — male palp, retrolateral view; 38 — male palp, ventral view; 39 — epigyne, ventral view; 40 — epigyne, ventral view (after maceration); 41 — epigyne, dorsal view (after maceration).

Рис. 37–41. Копулятивные органы *Paratrachelas maculatus*: 37 — пальпа самца, ретролатерально; 38 — пальпа самца, вентрально; 39 — эпигина, вентрально; 40 — эпигина, вентрально (после мацерации); 41 — эпигина, дорсально (после мацерации).

Trachelas m.: Chyzer & Kulczyński, 1897: 252–253, pl. 10, f. 15 (♂♀).

Trachelas m.: Mikhailov, 1987: 1584–1586, f. 1–2 (♂♀).

FAUNISCIC RECORDS FROM CRIMEA: Thorell, 1875a — as *T. m.* sp.nov.; Thorell, 1875b; Spassky, 1927; Charitonov, 1932; Tyshchenko, 1971; Mikhailov, 1987, 1997; Kovblyuk, 2002, 2004a, b; Kovblyuk et al., 2008 — all as *Trachelas*.

MATERIAL. UKRAINE, CRIMEA. Bakhchisaray Distr.: 1 ♀ (TNU), env. Vilino Vil., Syrkayr dell, 14.10.1999; Dzhankoy Distr.: 1 ♀ (EMZ), env. Prostornoe Vil., 10.11. 1998; Feodosiya Distr.: 1 ♀ (TNU–1808/2), Karadagh Nature Reserve, north slope of Beregovoy Mt. range, *Fraxinus*, 15.10.2003; 3 ♀♀ (TNU–1981/5, 2295/3, 2292/4), Karadagh Nature Reserve, Biological station, 11.2004–31.01.2007, O.V. Kukushkin; Sevastopol Distr.: 1 ♂ (EMZ), env. Sarych Cape, 07.1998, O.V. Kukushkin; Simferopol Distr.: 9 ♂♂ (TNU, ZMMU), env. Fersmanovo Vil., Kessler's Forest, 4.09.1998–26.08.2000; 1 ♂, 1 ♀ (TNU–1933/9), Chatyr-Dagh Mt., Orlinoe gorge, 11.08.–2.09.2000; Yalta Distr.: 1 ♀ (ZMMU–1264/10), Yalta, Massandra Park, 22.10.–12.11.2000.

DIAGNOSIS. *P. maculatus* is closely related to *P. acuminus* (Zhu et An, 1988) from China and Korea [Song et al., 1999: f. 255O–P, 256E–F; Song et al., 2001: f. 208A–G], but differs in having a much wider conductor in the male (in *P. acuminus* the conductor is as thin as the embolus and pointed; in *P. maculatus* the conductor is much thicker than the embolus and not pointed) and a narrower anterior epigynal pocket in the female.

DESCRIPTION. Measurements (♂ / ♀; n = 1 / 1): total length 3.1 / 4.8; carapace 1.6 / 1.9 long, 1.4 / 1.7 wide. Eye diameters and interdistances: AM 0.11 / 0.13, AL 0.13 / 0.13, PM 0.13 / 0.14, PL 0.10 / 0.11, AM–AM 0.06 / 0.06, AM–AL 0.06 / 0.06, PM–PM 0.13 / 0.15, PM–PL 0.14 / 0.15, AM–PM 0.06 / 0.07, AL–PL 0.11 / 0.11. Distances between anterior eyes and clypeal margin: AM–clypeus 0.07 / 0.08, AL–clypeus 0.04 / 0.05. Length of leg segments (male / female):

	femur	patella	tibia	metatarsus	tarsus	Total length
I	1.3/1.3	0.6/0.7	1.2/1.0	1.0/0.9	0.5/0.5	4.6/4.4
II	1.2/1.3	0.6/0.6	1.0/1.0	0.9/0.9	0.5/0.5	4.2/4.3
III	0.8/0.9	0.4/0.5	0.6/0.7	0.7/0.8	0.3/0.3	2.8/3.2
IV	1.0/1.3	0.4/0.6	0.9/1.0	1.0/1.2	0.4/0.4	3.7/4.5

Length of palpal segments (male / female): femur 0.6 / 0.6, patella 0.2 / 0.2, tibia 0.2 / 0.4, cymbium / tarsus 0.7 / 0.5. Legs spines absent. All legs with claw tufts; metatarsi III–IV with distal preening brush (Figs 72–75, 78–81). Male (n = 3) I–II legs with some cusps (Figs 68–70, 72–73): I — tibia: v-p 1 or 0; metatarsus: v-p 1-1 or 1-1-1, v 2-2(a) or 0; tarsus: v 1 or 1-1-1; II — metatarsus: v-p from 1-1 to 1-1-1-1-1, v 2-2 or 0; tarsus: v-p 1 or 1-1-1, v 1-1 or 0.

Cheliceral teeth (anterior + posterior): 3 / 3 +2 / 2, length of base cheliceral segment (n ♂ / ♀ = 2 / 2) 0.6-0.8 / 0.9. Length of basal segments of spinnerets: anterior 0.14 / 0.18, median 0.11 / 0.14, posterior 0.12 / 0.17.

Carapace dark brown with vermiculation. Sternum brown. Abdomen gray. Legs and palps light brown. Habitus: male — Figs 42–48; female — Figs 55–61.

Male palp: Figs 37–38, 49–54. Female epigyne: Figs 39–41, 62–64. Tibia of male palp with retrolateral tibial apophysis, patella without apophysis. Tibial apophysis as long as tibia. Embolus coiled around conductor. From ventral view conductor wide, with small pointed lobes on edge (Figs 38, 54). Epigyne with well developed C-shaped anterior epigynal pocket in front of anterior pair of receptacles, and lateral epigynal pockets. Copulatory openings with lateral epigynal pockets, located posterior of spermathecae.

VARIATION. Male total length (n = 4) 3.0 to 4.0; carapace length (n=7) 1.4 to 2.1; width 1.2 to 1.8. Female total length (n = 5) 3.4 to 5.2; carapace length (n=6) 1.7 to 2.2; width 1.5 to 1.9.

NOTE. Type locality — Crimea [Thorell, 1875a, b].

DISTRIBUTION. Eastern Europe: Hungary, Bulgaria, Ukraine (Crimea) [Thorell, 1875a, b; Chyzer & Kulczyński, 1897; Mikhailov, 1987].

HABITATS. *P. maculatus* was collected by pitfall traps and under tree bark in sub-mediterranean parklands of south Crimea, in sub-montane and montane forest-steppes of north Crimea, and in forest plantations of *Ulmus* sp., *Pinus pallasiana*, and *Bambusa* sp.

PHENOLOGY. ♂♂ — VII–IX; ♀♀ —VIII–I.

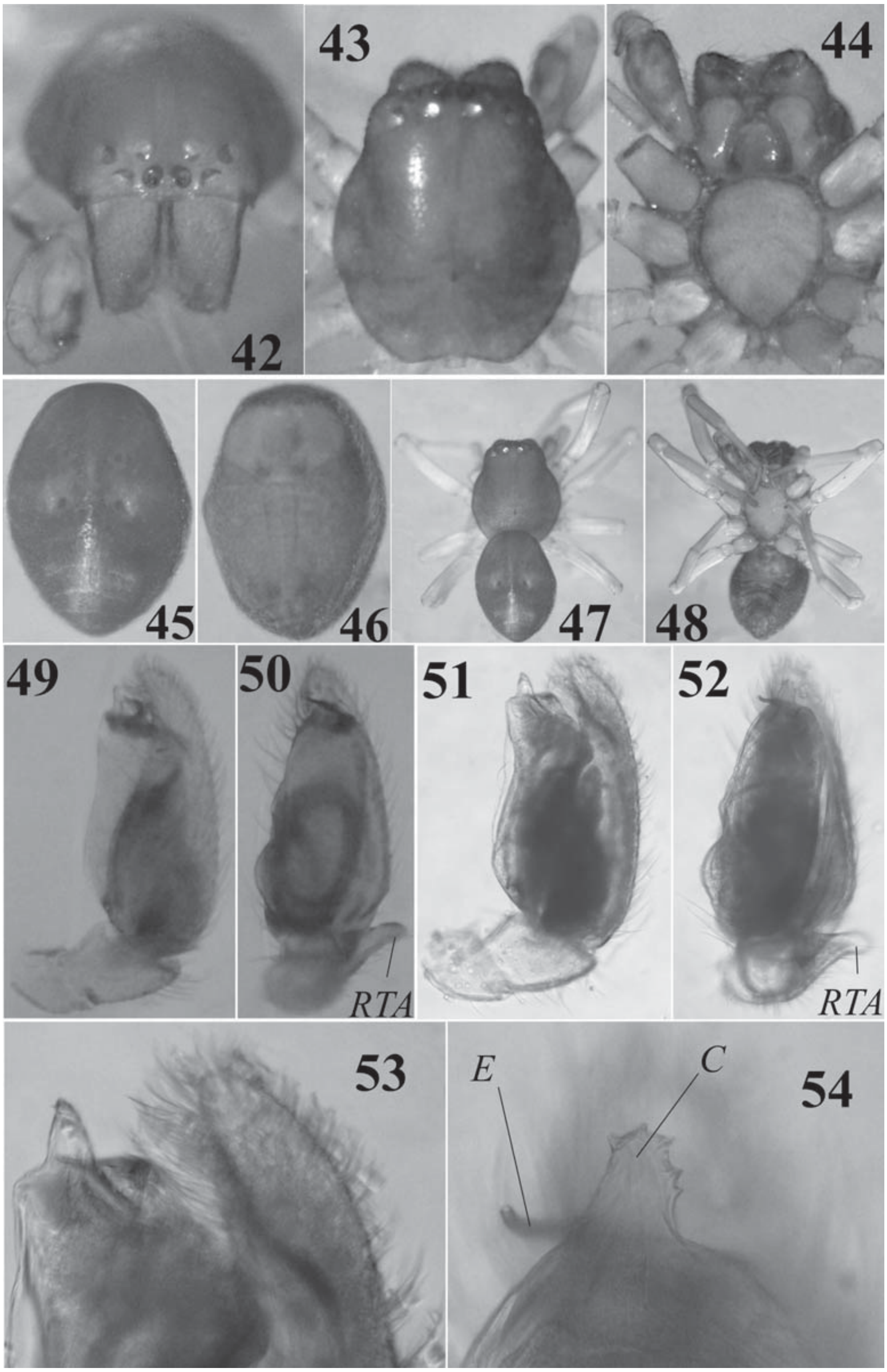
Discussion

Among the Nearctic *Trachelas* species, only *T. borinquensis* Gertsch, 1942, from Puerto Rico has patellar apophyses and lacks tibial apophyses [Platnick & Shadab, 1974b: f. 79–80]. Additionally, most Nearctic *Trachelas* species have cusps on male legs I–II, which are absent in the type species. This suggests that American species (except *T. borinquensis*) should probably be assigned to another genus (or genera).

In the Palaearctic region only a few species have patellar apophyses (probably, only *T. canariensis* Wunderlich, 1987, *T. japonicus* Bösenberg & Strand, 1906, and *T. sinensis* Chen, Peng & Zhao, 1995). Only these species are probable congeners to the type species and represent *Trachelas* sensu stricto; the remaining species probably represent additional genera.

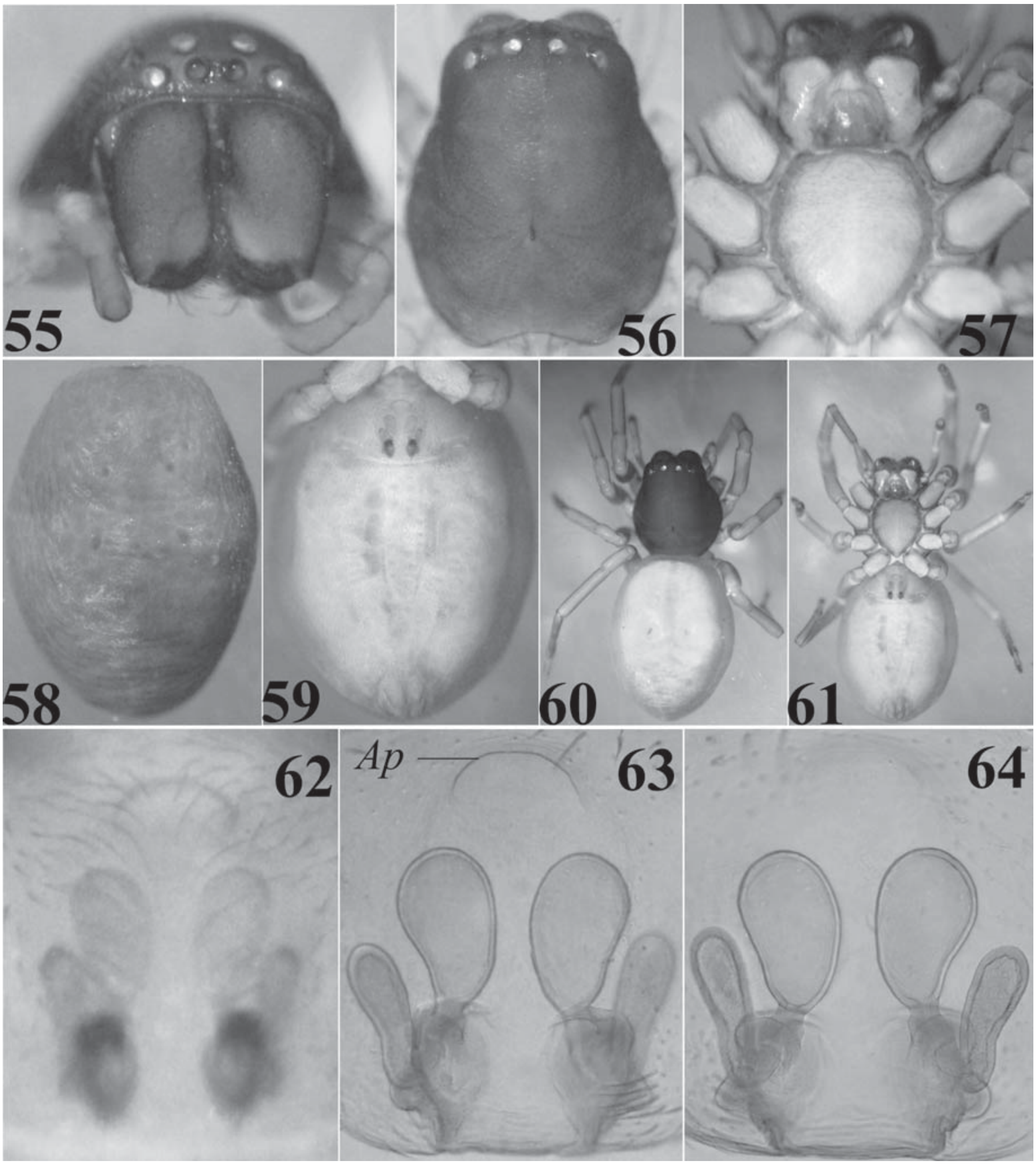
As was mentioned earlier, among the Neotropical Trachelinae, some species of the genus *Meriola* Banks, 1895, have anterior pocket of epigyne [Platnick & Shadab, 1974b; Platnick & Ewing, 1995]. But the anterior epigynal pocket is absent in the type species of *Meriola* — *M. decepta* [Platnick & Shadab, 1974b: 105–106]. In addition, some *Meriola* species have normal leg spines, unlike the type species [Platnick & Ewing, 1995]. Probably, the genera *Meriola* and *Trachelas* are both polyphyletic.

ACKNOWLEDGEMENTS. The authors sincerely thank E.M. Zhukovets (Minsk, Belarus) for help with species identification, A.V. Ponomarev (Rostov-on-Don, Russia) for information and measurements concerning the female specimen of *T. minor* from Ingushetia, O.V. Kukushkin (Karadagh Nature Reserve, Ukraine) for providing some spider specimens from Crimea, and Yu.M. Marusik (Magadan, Russia) for the important remarks and corrections and for the reference search, and G. Levy (Jerusalem, Israel) and E. Gavish-Regev (Tel-Aviv, Israel) for the search of the old papers. We offer many thank to R.S. Dbar (Sukhum, Abkhazia), N.N. Yunakov (St.-Petersburg, Russia), A.A. Khaustov (Yalta, Ukraine), O.S. Bezman-Moseyko and E.G. Sergeeva (both — St.-Petersburg, Russia) for much help during the collecting trip of M.K. in July 2008 to Abkhazia; P.E. Gol'din (Simferopol) for improving the English of the earlier draft, and two anonymous reviewers, who gave valuable comments. English of the final draft was checked by Robin Leech (Edmonton, Canada).



Figs 42–54. Male of *Paratrachelas maculatus*: 42 — cephalothorax, frontal view; 43 — carapace; 44 — sternum; 45 — abdomen, dorsal view; 46 — abdomen, ventral veiw; 47 — general appearance, dorsal view; 48 — general appearance, ventral view; 49 — palp, retrolateral view; 50 — palp, ventral view; 51 — palp, retrolateral view (after maceration); 52 — palp, ventral view (after maceration); 53 — apical part of palp, retrolateral view (after maceration); 54 — apical part of bulbus, ventral view (after maceration).

Рис. 42–54. Самец *Paratrachelas maculatus*: 42 — головогрудь, спереди; 43 — карапакс; 44 — стернум; 45 — брюшко, дорсально; 46 — брюшко, вентрально; 47 — габитус, дорсально; 48 — габитус, вентрально; 49 — пальпа, ретролатерально; 50 — пальпа, вентрально; 51 — пальпа, ретролатерально (после мацерации); 52 — пальпа, вентрально (после мацерации); 53 — верхняя часть пальпы, ретролатерально (после мацерации); 54 — верхняя часть бульбуса, вентрально (после мацерации).



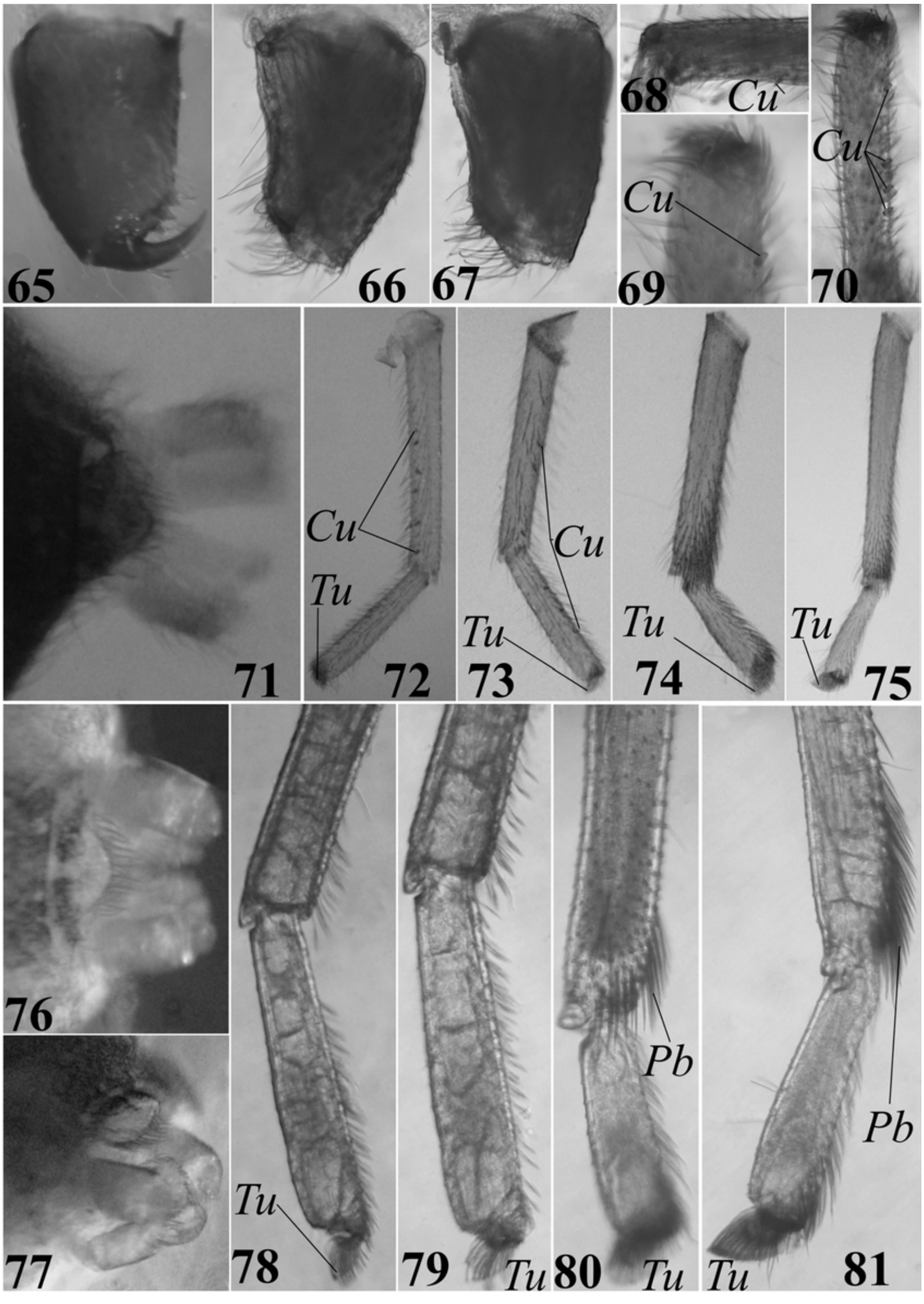
Figs 55–64. Female of *Paratrachelas maculatus*: 55 — cephalothorax, frontal view; 56 — carapace; 57 — sternum; 58 — abdomen, dorsal view; 59 — abdomen, ventral veiw; 60 — general appearance, dorsal view; 61 — general appearance, ventral view; 62 — epigyne, ventral view; 63 — epigyne, ventral view (after maceration); 64 — epigyne, dorsal view (after maceration).

Рис. 55–64. Самка *Paratrachelas maculatus*: 55 — головогрудь, спереди; 56 — карапакс; 57 — стернум; 58 — брюшко, дорсально; 59 — брюшко, вентрально; 60 — габитус, дорсально; 61 — габитус, вентрально; 62 — эпигина, вентрально; 63 — эпигина, вентрально (после мацерации); 64 — эпигина, дорсально (после мацерации).

This work of M.K. was supported in part by the Karadagh Nature Reserve and the Yalta Forest-Mountain Reserve, and the Russian Foundation for Basic Research (grant No 09-04-90900-моб_снг_ст).

References

Charitonov D.E. 1932. Katalog der russischen Spinnen. AN SSSR. Leningrad: Izdatelstvo AN SSSR. 206 S.



Figs 65–81. *Paratrachelas maculatus*: 65 — female chelicerae, ventral view; 66 — male chelicerae, ventral view; 67 — male chelicerae, dorsal view; 68 — male tibia I, prolateral view; 69–70 — male tarsus I, prolateral view; 71 — male spinnerets, dorsal view; 72–75 — male legs (tarsus–metatarsus) I–IV, prolateral view; 76 — female spinnerets, dorsal view; 77 — female spinnerets, dorso-lateral view; 78–81 — female legs (tarsus–metatarsus) I–IV, prolateral view.

Рис. 65–81. *Paratrachelas maculatus*: 65 — хелицера самки, вентрально; 66 — хелицера самца, вентрально; 67 — хелицера самца, дорсально; 68 — голень I самца, пролатерально; 69–70 — лапка I самца, пролатерально; 71 — паутинные бородавки самца, дорсально; 72–75 — лапки–предлапки I–IV самца, пролатерально; 76 — паутинные бородавки самки, сверху; 77 — паутинные бородавки самки, сверху–сбоку; 78–81 — лапки–предлапки I–IV самки, пролатерально.

Chyzer C., Kulczyński W. 1897. Araneae Hungariae. T. Pars 2.. Budapest. P.147–366.

Kovblyuk M.M. 2002. [To the question about endemism of Crimean spiders (Arachnida, Aranei)] // Biodiversity on reserve territories: 5 years after Gurzuf. Proceedings of II science conference (25–26 April 2002, Simferopol, Crimea). Simferopol: KGMU. P.103–109 [in Russian].

Kovblyuk N.M. 2004a. [Catalogue of the spiders (Arachnida: Aranei) of the Crimea, South Ukraine] // Points on the development of the Crimea. Analytical, scientific and practical collected articles open to discussion. 15-th issue: Problems of the ecology in the Crimea. Inventory animals and plants species in the Crimea. Simferopol: Tavriya-Plus. P.211–262 [in Russian].

Kovblyuk M.M. 2004b. [Preliminary results of study fauna and biotope distribution of spiders in the Karadagh Nature Reserve] // National Academy of Sciences of Ukraine. Karadagh Nature Reserve. Annals of Nature. T.20 (for 2003). P.139–145 [in Russian].

Kovblyuk M.M., Kukushkin O.V., Gnelitsa V.A., Nadolny A.A. 2008. [Brief atlas of spiders (Arachnida, Aranei) of Karadagh Nature Reserve]. Simferolol: N. Orianda. 120 pp [in Russian with English summary].

Mikhailov K.G. 1987. Redescription of spider *Trachelas maculatus* (Aranei, Corinnidae) // Zool. journal. T.66. No.10. P.1583–1586 [in Russian].

Mikhailov K.G. 1997. Catalogue of the spiders of the territories of the former Soviet Union (Arachnida, Aranei). Moscow: Zoological Museum of the Moscow State University. 416 pp.

Mikhailov K.G., Seyfulina R.R. 2003. New records of rare spider *Trachelas maculatus* (Aranei, Corinnidae) // Vestnik zoologii. T.37. No.2. P.96 [in Russian].

Pickard-Cambridge O. 1872. General list of the spiders of Palestine and Syria, with descriptions of numerous new species, and characters of two new genera // Proc. zool. Soc. Lond. 1871. P. 212–354.

Platnick N.I. 2009. The World Spider Catalog. Version 9.5. (Fam. Corinnidae Karsch, 1880). American Museum of Natural History. Online et: http://research.amnh.org/entomology/spiders/catalog/incex.html

Platnick N.I., Ewing C. 1995. A revision of the Tracheline spiders (Araneae, Corinnidae) of southern South America // American Museum Novitates. No.3128. 41 pp.

Platnick N.I., Shadab M.U. 1974a. A revision of the *tranquillus* and *speciosus* groups of the spider genus *Trachelas* (Araneae, Clubionidae) in North and Central America // American Museum Novitates. No.2553. 34 pp.

Platnick N.I., Shadab M.U. 1974b. A revision of the *bispinosus* and *bicolor* groups of the spider genus *Trachelas* (Araneae, Clubionidae) in North and Central America and the West Indies // American Museum Novitates. No.2560. 34 pp.

Simon E. 1878. Les arachnides de France. Tome VI. Le famille des Drassidae. Paris. 334 pp.

Simon E. 1897. Histoire naturelle des Araignées. T.2. Paris. P.1–192.

Simon E. 1932. Les arachnides de France. Tome VI. Synopsis general et le Catalogue des espèces françaises de l'ordre des Araneae: 4e partie. Paris. P.773–978.

Song D., Zhu M., Chen J. 1999. The spiders of China. Shijiazhuang: Hebei Science and Technology Publishing House. 640 pp.

Song D., Zhu M., Chen J. 2001. The Fauna of Hebei, China: Araneae. Shijiazhuang: Hebei Science and Technology Publishing House. 510 pp. [in Chinese].

Spassky S.A. 1927. [Materials to the spider fauna of the Tauric Gouvernement] // Izvestiya Donskogo Instituta Sel'skogo Khozyaistva i Melioratsii. Vol.7. P.66–80 [in Russian].

Thorell T. 1875a. Verzeichniss Sudrussischer Spinnen // Horae Societatis Entomologicae Rossicae. T.11. No.2. P.39–122.

Thorell T. 1875b. Descriptions of several European and North-African spiders // Kungl. Svenska Vetenskaps-Akademiens Handlingar. Bd.13. No.5. 204 pp.

Tyshchenko V.P. 1971. [Identification key to spiders of the European part of the USSR]. Leningrad: Nauka Publ. 281 pp. [in Russian].

Wunderlich J. 1987. Die Spinnen der Kanarischen Inseln und Madeiras: Adaptive Radiation, Biogeographie, Revisionen und Neubeschreibungen. Langen: Triops Verlag. 435 S.

Wunderlich J. 1992. Die Spinnen-Fauna der Makaronesischen Inseln: Taxonomie, Okologie, Biogeographie und Evolution // Beiträge zur Araneologie. Bd.1. 619 S. [in German and English].